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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,647	08/28/2001	Shigern Umebara	N99147USDIV	5529

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MCGINN & GIBB, PLLC
8321 OLD COURTHOUSE ROAD
SUITE 200
VIENNA, VA 22182-3817

EXAMINER

MACKEY, TERRENCE M

ART UNIT	PAPER NUMBER
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1765

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DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/939,647

Applicant(s)

UMEHARA, SHIGERU

Examiner

Terrence Mackey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 - 4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/535741.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3 – 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Page 30, line 10, through page 31, line 29 of the applicant's specification describe the process steps for making a through hole in ink supply plate (30) by process steps of forming a first resist film and second resist film on a first and second surface in the ink supply plate (30) and in particular disclose that the resist films should be offset from each other so that the applicant's "half etching" process will result in a displacement amount "A" of the center "C1" of the upper passage portion relative to the center "C2" of the lower passage portion. The examiner notes that claims 3 - 4 are directed to forming offset resist masks on a first and second surface of the first plate which is disclosed as being used for the formation of the pressure generating chamber of the ink jet recording head.

Claim Rejections - 35 USC § 102/103a

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 - 2 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over, Yotsuya et al., JP 06055733A. Applicant discloses a method for forming a through hole in a first plate which is to be sandwiched between a second and third plate to form an ink jet recording provided with a pressure generating chamber constructed of the first plate, and wherein the through hole is made by forming a first resist film and a second resist film on a first and second surface of said first plate, wherein the first resist film and second resist film assume substantially the same shape but are different in length from each other when measured in a direction parallel to a flow direction of ink, and forming said through hole in said first plate by etching both said first and second surface of said first plate with use of said first resist film and second resist film both of which serve as etch masks.

Yotsuya et al. teach a method for manufacturing an ink jet recording head provided with a pressure generating chamber, wherein the pressure generating chamber is constructed of a first plate sandwiched between a second and third plate

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and wherein the first plate is provided with a through hole and one of the second plate or third plate is provided with an ink outlet passage in its ink discharge side. Yotsuya et al. discloses a method for making a through hole in a silicon substrate to serve as the first plate member by coating resist films on both faces of the silicon substrate and patterning the resist films to form mask openings which are different in length from each other as measured in a direction parallel to a flow direction of ink and etching the silicon substrate to form the through hole therein.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform Yotsuya's method on a first plate of approximately 140 micron thickness with a difference in length between said first resist film and said second resist film of from 80 to 140 micron as these dimensions are inherent in the Yotsuya reference.

Conclusion

Remaining references cited of interest to show the state of the art.

No claim is allowed.

Papers relating to this application may be submitted to Technology Sector 1700 by facsimile transmission. Papers should be faxed to Crystal Plaza 3, Art Unit 1765, using fax number (703) 305-6357. All Technology Sector 1700 fax machines are available to receive transmissions 24 hrs/day, 7 days/wk. Please note that the faxing of such papers must conform to the Notice published in the Official Gazette, 1096 OG 30, (November 15, 1989).

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Terrence Mackey whose telephone number is (703) 305-5504. The Examiner can normally be reached Monday - Friday from 7:00 AM – 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the examiner's supervisor, Ben Uteck, can be reached at (703) 308-3836.

Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0661.

TMM

March 21, 2003

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke, positioned above the printed name.

ROBERT KUNEMUND
PRIMARY EXAMINER